BLAUPUNKT

TravelPilot RGS 06

5" TFT Display

7 612 001 126

Installation notes for authorired service workshops

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Safety information

Installation and connection regulations

You must disconnect the negative terminal of the battery during the installation and connection of the equipment.

Warning!

You must also comply with all safety instructions provided by the vehicle manufacturer (alarm system, vehicle immobiliser, airbag)!

Before drilling holes for the mounting brackets or wiring, make sure that you will not damage any existing wiring or vehicle parts (such as the petrol tank or fuel lines).

Use cable grommets on sharp-edged holes.

Lay all wiring far enough away from the wiring harness to prevent interference. The + supply cable must be fitted with a fuse at a maximum of 30 cm from the battery to protect the vehicle battery and the + supply cable in the event of a short circuit.

The navigation unit is suitable for vehicles with:
- **12 volt battery**
- **Negative pole on the chassis**

Equipment fuses: **5 A wiring fuse**
5 A equipment fuse

Product information

The **TravelPilot RGS 06** navigation system is an autonomous system equipped with an integrated gyro. Following the entry and activation of a destination, the system provides visual driving recommendations well in advance of any turn-off points in the form of pictograms on a 5" colour monitor and spoken driving information over a separate speaker, thus guiding the motorist from his/her starting point to a selected destination via the best available route.
The scope of the functions provided is determined in the specifications of the CD-ROM used. The CD-ROM for individual countries + operating manual are available separately.

Notes on the operation of the equipment

To ensure the trouble-free operation of the navigation system, a distance calibration must be performed after the equipment has been installed.
The service software integrated into the basic navigation unit allows you to start up the navigation system and to calibrate the wheel sensor using the SERVICE MENU following the installation of the unit or during later servicing. All that is required is a straight stretch of road of at least 100 m in length. The software also provides additional service functions for analysing any malfunctions in the navigation system.

The system determines the distance travelled via a connection to the vehicle's speedometer signal. If there is no speedometer signal available, it will be necessary to have a wheel sensor mounted by an authorised customer service agent.

The wheel sensor scans a magnetic strip which is glued to the wheel rim and delivers information on the distance travelled by the wheel. Due to automatic length adaptation, the magnetic strip must be applied to the non-driven left-hand wheel.

The system recognises driving forwards and backwards by evaluating the back-up signal (forwards = 0 volts, backwards = 12 volts) received via the connection contact (RFLS) provided for that purpose.

Because of the integrated gyro and CD-ROM drive, it is essential that the basic navigation unit be installed in a horizontal position.

Preparing for installation

Before beginning your work, check the equipment to make sure that everything has been included: ..... page 7

The following installation steps must be performed:

- **Installing the navigation unit (computer)** ..... page 4
- **Connecting the GPS antenna** ..... page 4
- **Installing the display** ..... page 4
- **Installing the speaker** ..... page 4
- **Installing the control unit** ..... page 4
- **Installing the wheel sensor** ..... page 5
  (only for vehicles without a speedometer signal)

Installing the navigation unit

Mounting location for the navigation unit

The navigation unit need not be installed at any particular location.
When choosing the mounting location for the navigation unit, you must make sure that the unit is screwed firmly to the chassis in a **horizontal** position (you must be able to read the writing on the flap) while observing the following permissible angles of installation:

Position:		
	right/left	min. -5° / max. +5°
	sloping towards the rear	min. 0° / max. +5°

A fan has been integrated into the basic navigation unit to provide cooling in the event that it overheats. The air vents around the unit must remain uncovered to ensure adequate air circulation. Make sure that there is enough room to insert the navigation CD into the CD drive. Use the enclosed installation material in order to mount the navigation unit. See Fig. 1

Positive connection

The navigation unit must be connected to permanent plus 12 V and positive via the ignition.
Lay the permanent plus 12 V cable (red) to the battery (do not lay the wiring directly by the cable harnesses). **Attach the fuse holder to protect the positive cable a maximum of 30 cm from the vehicle battery and connect it to the positive terminal on the battery** (if necessary, drill a hole through the splashboard and use cable grommets accordingly). Connect the positive switching cable (black) with the fuse holder at terminal 15 (+ switched via ignition) behind the fuse.
In vehicles in which it is not possible to connect the cable in the fuse box, use the enclosed fuse holder to connect the cable directly to terminal 15 at the ignition.

Negative connection

Screw the negative cable (brown) directly onto the chassis. Scratch the contact point for the ground down to the bare metal and grease it with anti-seize graphite petroleum (important for good grounding).

Connecting the GPS antenna

Safety instructions

Mount the antenna only on a metal roof with magnetic properties (not suitable for aluminium). Do not mount the antenna on roofs covered with leather or synthetic materials.
When mounted on a roof (held only by a magnet), the

antenna must not be exposed to temperatures of less than -20 °C or more than +80 °C.

If necessary, use protective sheathing to protect the antenna cable from being pinched.
The adherent surface of the antenna must be free of dirt, snow, ice, etc.
You must not lengthen, shorten or put a kink in the antenna cable. Do not remove the plug during the installation.
If the antenna is painted the same colour as the vehicle, this may have an adverse effect on the reception, especially if paints containing a high percentage of metal are used. We assume no guarantee that the antenna will operate properly after it has been painted.
On notchback vehicles, attach the antenna to the boot lid using the mounting brackets. Depending on the thickness of the metal, use the corresponding headless screws, Fig. 2.
On estate and hatchback cars, affix the antenna to the roof with its magnetic foot, Fig. 3.
For a roof mount, remove the mounting brackets. Use the adhesive strips enclosed to cover the screw holes, Fig. 4.
For estate and hatchback cars, lay the antenna cable along the rain gutter downwards and into the interior of the vehicle.
Any obstacles near the antenna, such as roof racks or bicycle carriers, may have an adverse effect on or even obstruct satellite reception.
Route the antenna cable into the interior of the vehicle and connect the plug on the antenna cable with the antenna jack on the basic unit.
It is advisable to remove the antenna from the roof when driving through a car wash.
If the GPS antenna is mounted inside the vehicle, there is no guarantee that the system will function correctly.

Installing the display

Safety instructions

Never grease or oil the ball-and-socket joint.
The monitor cable must be laid so that it is not subjected to any tensile strains or other loads.

Important!
Do not mount the monitor within the inflation range of the airbags (on the driver's side, the passenger side or the side airbags) or where it might strike the head or knees of anyone in the vehicle in the event of an accident!

Before drilling the holes for the mounting screws and wiring, make sure that no damage will be done to covered wiring, the petrol tank or fuel lines!

Positive-negative connection

Connect the negative cable (brown) directly with the negative cable of the navigation computer (same ground potential).
Connect the positive cable (switched + 12 V) directly with the positive cable (switched + 12 V) of the navigation computer.
Upon customer request, the lighting connection (orange) can be connected with vehicle terminal 58d.
Terminal 58d must be regulated by pulse width modulation. (PWM-signal clock frequency 60 ... 180 Hz, pulse-duty factor 10 % (min.) ... 100 % (max.), positive.
Amplitude - battery voltage. Please refer to the instructions provided by the vehicle manufacturer.

Display installation

Fig. 6 The display is mounted on the dashboard or console using the enclosed ball-and-socket base.

Fig. 7 The display is mounted directly on a console (telephone console) with the ball joint.

Fig. 8 The display is mounted using the gooseneck 7 612 001 204 and the ball joint. It is necessary to remove the back panel of the display first.
Drill a 10-mm hole at the mounting location to accommodate the wiring and lay the wiring without subjecting it to any tensile strains or other loads.

Display de-installation Fig. 9

1 Unscrew the four screws on the back of the display and remove the rear panel.
2 Pull out the plugs carefully and push them through the mounting base.
3 Then use the mounting material you require.

Installing the speaker

Install the speaker used for the spoken driving recommendations in the footwell of the vehicle.

Important!
Make sure that the vehicle operating elements remain easily accessible and are not obstructed in any way by the connection cable and the location of the speaker (gear stick, hand brake, accelerator, clutch or brake pedals, etc.)!

Important!
Before drilling the holes for the mounting screws, make sure that no damage will be done to covered wiring, the petrol tank or fuel lines!

Installing the control unit

Mount the control unit bracket in a location where the control unit will be easily accessible, e.g. on the centre console.

Important!
Do not mount the control unit within the inflation range of the airbags (on the driver's side, the passenger side or the side airbags) or where it might strike the head or knees of anyone in the vehicle in the event of an accident!
Before drilling the holes for the mounting screws, make sure that no damage will be done to covered wiring, the petrol tank or fuel lines!
Make sure that the vehicle operating elements remain easily accessible and are not obstructed in any way (gear stick, hand brake, etc.)!

Important instructions for connecting the speedometer signal

Please observe the following notes when connecting the speedometer signal:

1. Location: In many vehicles the speedometer signal can be picked up from the vehicle's car radio jack. Please request the exact pinning from the vehicle manufacturer customer service centre or inquire at an authorised navigation dealer.
2. Do not tap the speedometer signal from ABS control units or the control lines.
3. If a vehicle has not been equipped with a speedometer signal, or if the TravelPilot system is unable to process the signal correctly, a wheel sensor must be mounted on the non-driven wheel closest to the middle of the carriageway.
4. **Important:**
   We assume no liability for equipment which has been connected incorrectly and any consequential damages!

Connecting the speedometer signal

Important: Only an authorised customer service centre should make this connection.

The connection is made with the speedometer signal cable, see parts included in the delivery, item (11) (white plug to white jack of the sensor adapter cable (item (8)) to the vehicle's specific car radio jack.

Connecting the back-up light signal cable

Important: Only an authorised customer service centre should make this connection.

The connection is made with the back-up light signal cable, see parts included in the delivery, item (10), yellow plug to yellow jack of the sensor adapter cable (item (8)) to the vehicle back-up light.
Make sure that this connection is charged with + 12 V when the vehicle is reversing.

Important:
We assume no liability for equipment which has been connected incorrectly and any consequential damages!

Distance calibration

After the completion of all installation and connection work, it is necessary to perform a distance calibration. Insert the navigation CD into the basic unit and access the Service Menu. When the calibration has been completed, the main menu will ap-pear on the screen. Your RGS 06 will be ready for operation if at least 3 satellites can be received (approx. 10 minutes of operation after start-up).

Installing the wheel sensor and the magneticstrip

Only for vehicles without a speed signal. In this case contact your specialised dealership to obtain the required sensor kit (travel sensor, magnetic strip, holder and cable). Sensor kit no.: 7 612 001 277.

Safety instructions

Important! The wheel sensor and the magnetic strip should be installed by an authorised customer service agent only.

Always observe the safety instructions provided by the automotive trade when working on the vehicle!
It is prohibited to screw the wheel sensor onto any load-bearing parts.
Never drill holes in any load-bearing parts.
Do not attach the sensor wiring to the brake lines or to any moving parts.
The wheels must be tightened using the torque recommended by the manufacturer.
For left-hand drive vehicles, mount the wheel sensor and the magnetic strip on the non-driven left-hand wheel, for right-hand drive vehicles, on the non-driven right-hand wheel. For four-wheel drive cars, on the left-hand rear wheel.
In order to mount the wheel sensor and the magnetic strip, the vehicle must be jacked up.

Important! Always observe the safety instructions provided by the automotive trade!

Installing the wheel sensor

Screw the wheel sensor onto the sensor carrier and look for a suitable mounting location. The sensors must not swing mechanically and they should be placed in a sheltered location, Fig. 10.
While mounting the wheel sensors, it is essential to comply with the installation tolerances.

Mounting the magnetic strip

After you have found a suitable location for the wheel sensor, you must determine the position of the magnetic strip on the inside of the wheel rim. Mark the location selected for the magnetic strip and remove the wheel.
Because the magnetic strip is glued into position, the rim must be free of rust, dirt, grease and water. Clean the inside of the wheel rim thoroughly.
To ensure that the glue adheres properly, the rim must be at room temperature.
After thoroughly cleaning the rim and perhaps allowing it to warm up, glue the magnetic strip onto the marked spots over the entire circumference parallel to the outer edge of the rim, Fig. 10.

Note:
Do not glue the magnetic strip directly onto the edge of the rim, as it is highly susceptible to damage there.

Do not piece the magnetic strip togetzer and cut it only at the marked points (maximum gap between the beginning and end point, one field = 1 inch = 25,3995 mm).

Mount the wheels and tighten the nuts. Align the wheel sensors in keeping with the installation tolerances and screw them on.

The wheels must be tighented using the torque recommended by the factory!

Lay the sensor wires into the interior of the vehicle (use any existing bushings or drill new holes) and lay them to the navigation unit.

Installation tolerances for the wheel sensor

Clearance Z: Z = 6.5 ± 1 mm (steel rim)
Z = 5 - 0/+ 1 mm (aluminium rim)
with respect to the centre of the wheel sensor, (Fig. 12).

Offset Y: The centre of the sensor must be located over the magnetic strip for the entire circumference of the wheel, (Fig 13).

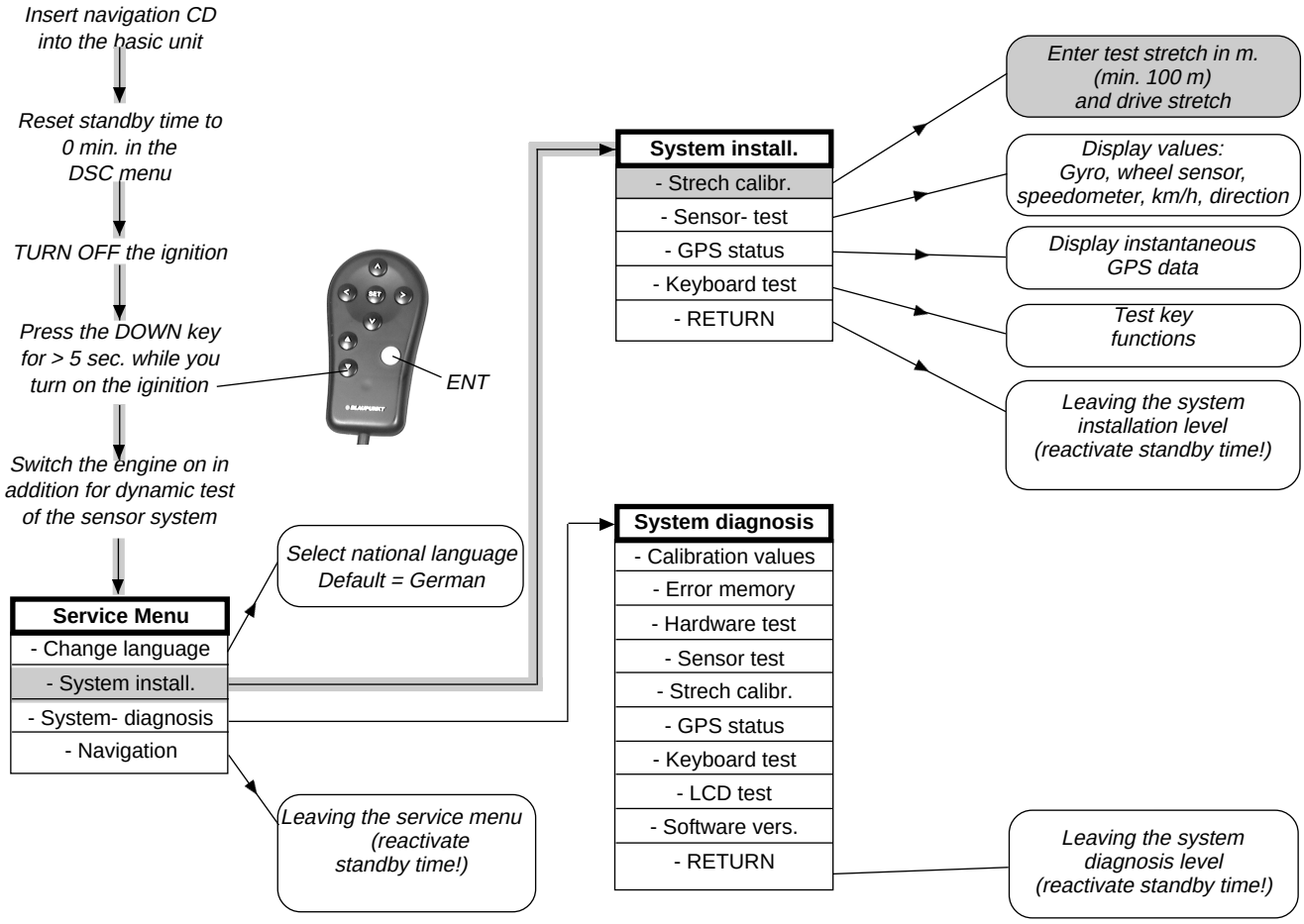
Set angle: The edges of the wheel sensor must be set at a distance conforming to Z, (Fig. 14).

Twisting angle: The turning angle must not exceed 10°, (Fig. 15).

Length of the metal holder: The free-standing length must be kept as short as possible (max. 90 mm).
If the free-standing length is greater than 90 mm, then the metal holder must be reinforced, (Fig.16).

Rotation angle T: The rotation angle must not exceed 20°, (Fig. 17).
Special case: T = 90°, Fig. 18
Important: Do not mount the metal holder facing in the direction of the magnetic strip, (Fig. 18 a).

RGS 06 Service Menu


Insert navigation CD into the basic unit
Reset standby time to 0 min. in the DSC menu
TURN OFF the ignition
Press the DOWN key for > 5 sec. while you turn on the iginition
ENT
Switch the engine on in addition for dynamic test of the sensor system
Service Menu
- Change language
- System install.
- System- diagnosis
- Navigation
Select national language Default = German
Leaving the service menu (reactivate standby time!)
System install.
- Strech calibr.
- Sensor- test
- GPS status
- Keyboard test
- RETURN
Enter test stretch in m. (min. 100 m) and drive stretch
Display values: Gyro, wheel sensor, speedometer, km/h, direction
Display instantaneous GPS data
Test key functions
Leaving the system installation level (reactivate standby time!)
System diagnosis
- Calibration values
- Error memory
- Hardware test
- Sensor test
- Strech calibr.
- GPS status
- Keyboard test
- LCD test
- Software vers.
- RETURN
Leaving the system diagnosis level (reactivate standby time!)

Technical data

Basic navigation unit 8 618 841 990
with integrated gyro, GPS receiver and CD-ROM player

-	Rated voltage (Urat)	14 V DC
-	Rated current (I)	Typically 0.55 A (Imax 1.05 A)
-	Stand-by current	Typically 0.35 A
-	Speech output/volume	Max. 3 Watt/4 Ohm
-	Time to first position computation	(Warm start, memory refresh) < 2 minute; (cold start, memory clear) < 15 minutes
-	CD-ROM drive	For 12 cm CD to DIN EN 60908 only
-	Operating temperature	-15°C to +60°C
-	Mounting orientation	Horizontal/+5°
-	Width	184 cm
-	Height	73 cm
-	Depth	171 cm
-	Weight	1.9 kg

5" colour display 8 638 710 538

-	Contrast control	Manual on rocker
-	Brightness control	Automatic by phototransistor, manual on rocker
-	Mounting	Universal ball-and-socket joint
-	Width	148 mm (without cable and base)
-	Height	105 mm (without cable and base)
-	Depth	51 mm (without cable and base)
-	Cable length	5.5 m
-	Illumination terminal	Pulse-width-modulated signal on terminal 58d (clock frequency 60 Hz - 180 Hz)

Subject to modification!

Scope of delivery

① **Navigation unit** with integral gyro and GPS receiver

② **GPS-antenna**

③ **Colour display**

④ **Loudspeaker**

⑤ **Control unit** including bracket

⑤a **8 618 841 480**
Remote control extension cable, 4 m

⑥ Fixings

⑦ **8 618 841 985**
Adapterkabel voor sensor- interface, ca. 25 cm

⑧ **8 618 841 412**
DC cable, 6 m

⑨ **8 618 842 033**
Reversing light cable, 4.5 m

⑩ **8 618 841 988**
Speedometer signal cable, 4,5 m

①

②

③

④

⑤

6

8 618 841 105

2 916 064 005 (4x)

2 910 645 120 (4x)

8 618 841 423 (58 x 13)

8 618 841 421 (58 x 9)

8 600 660 007 (6x)

9

gelb, yello, jaune, giallo,
geel, gul, amarillo, amarelo

10

weiß, white, blanc,
bianco, wit, vit, blanco,
branco

7

8

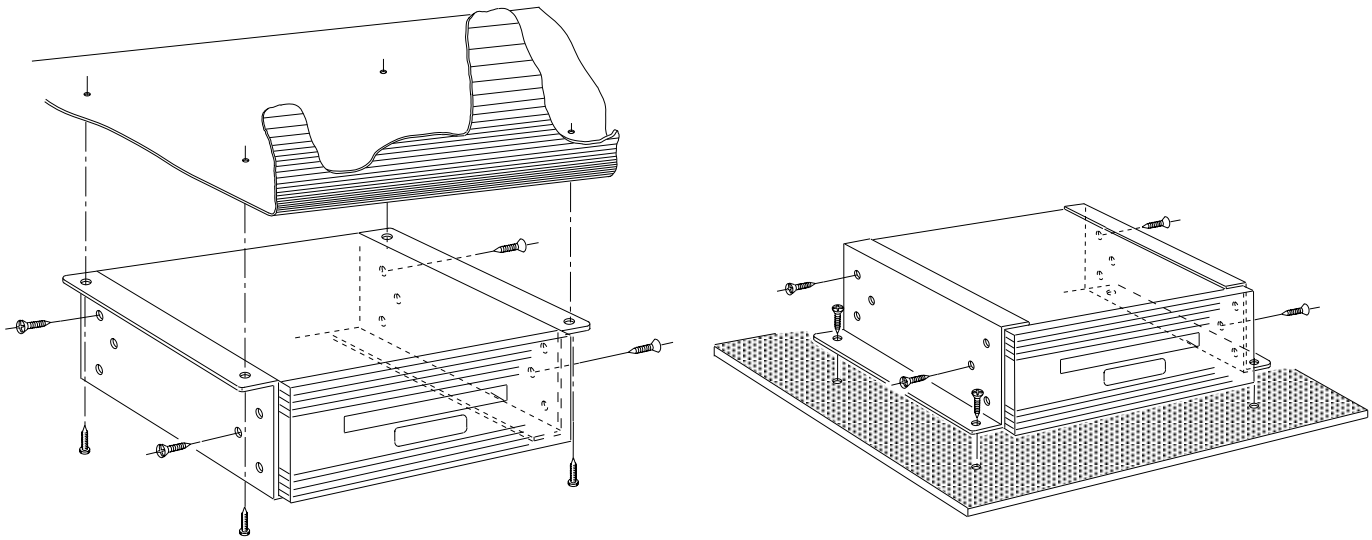


Fig.1

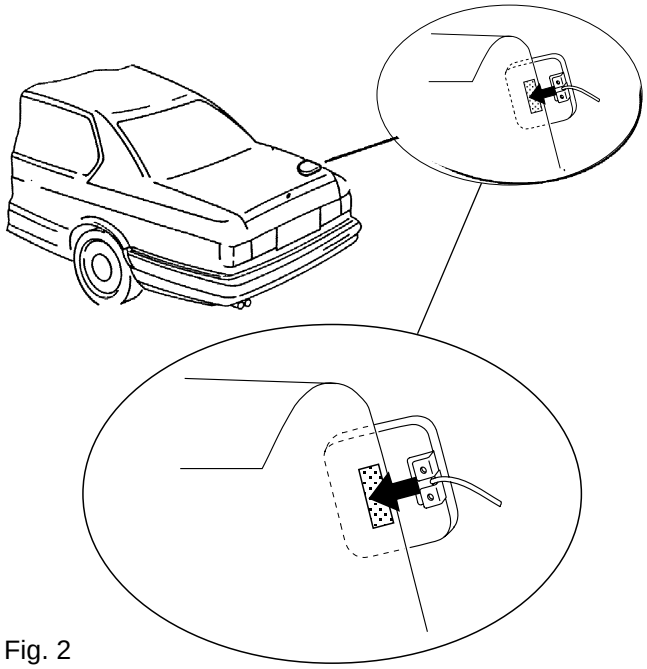


Fig. 2

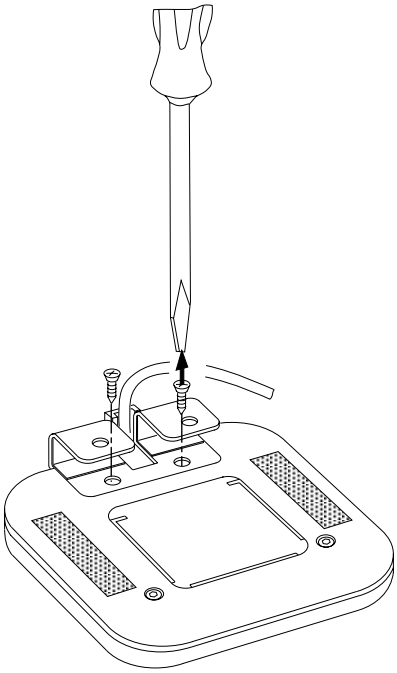


Fig. 4

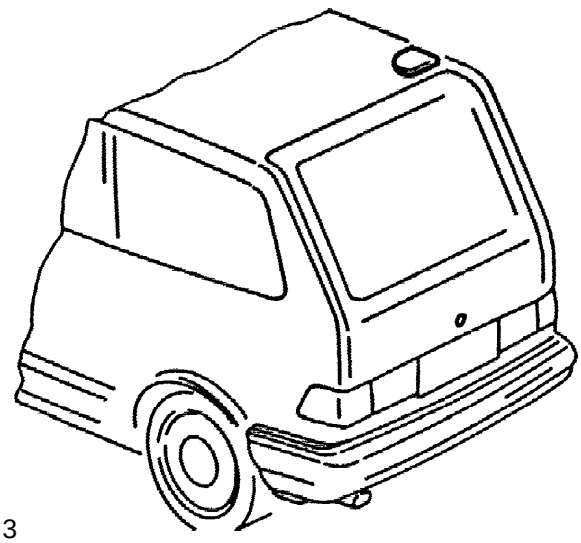


Fig. 3

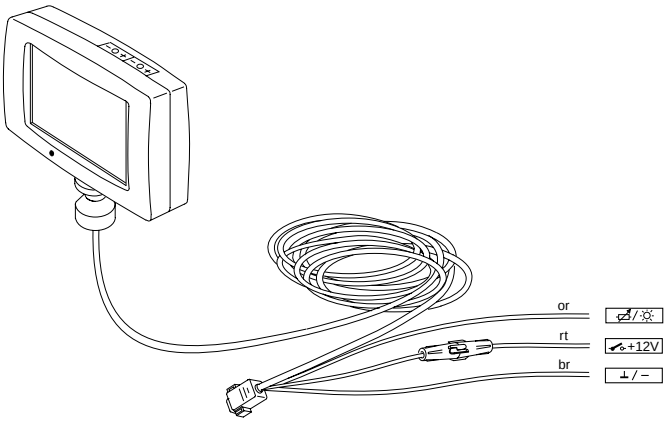


Fig. 5

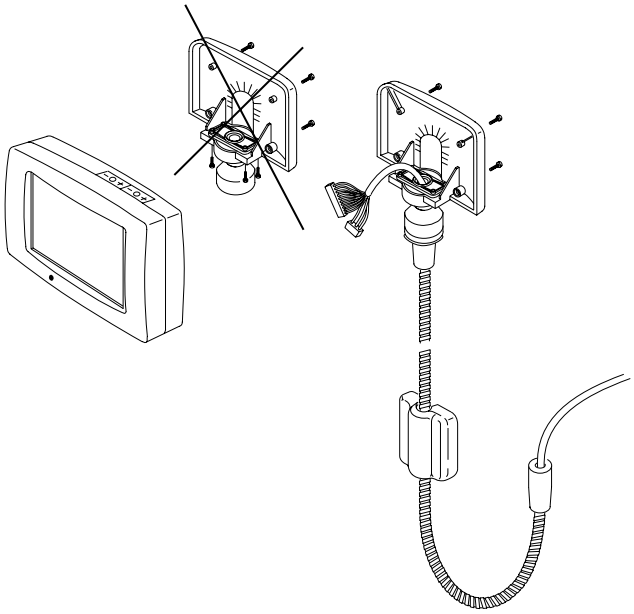


Fig. 8

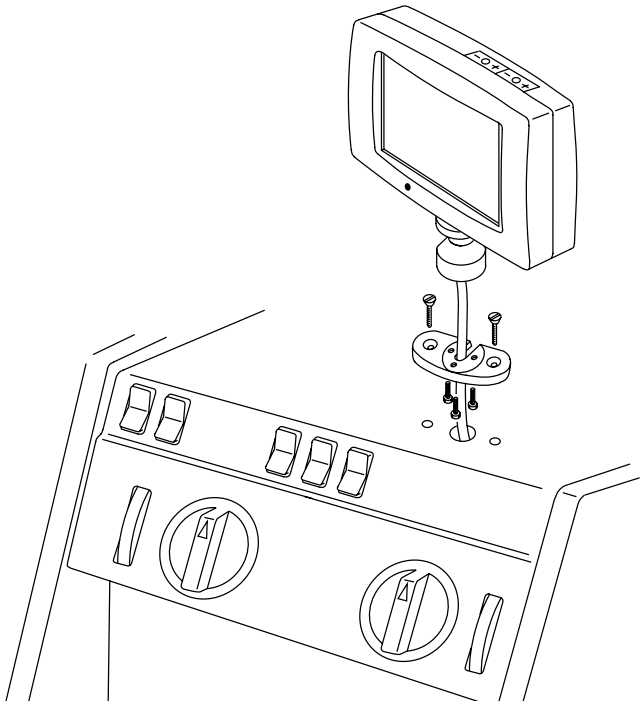


Fig. 6

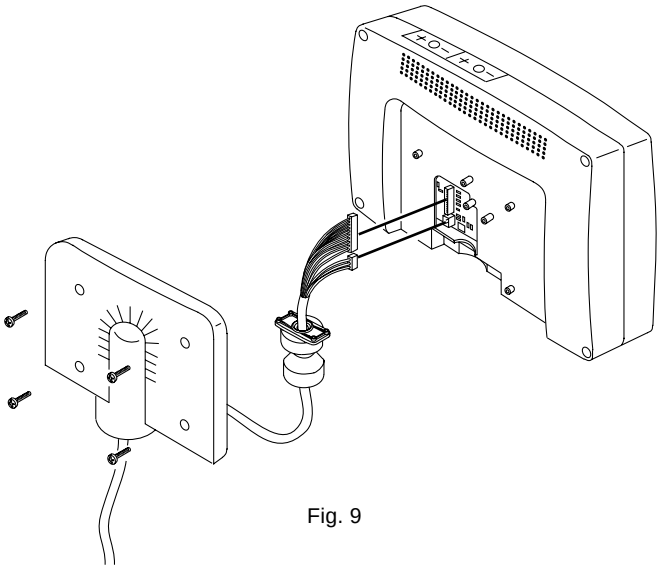


Fig. 9

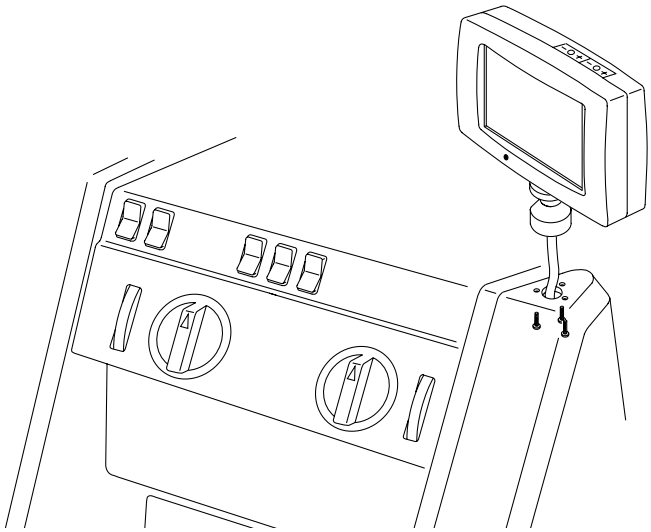


Fig. 7

2 914 551 015

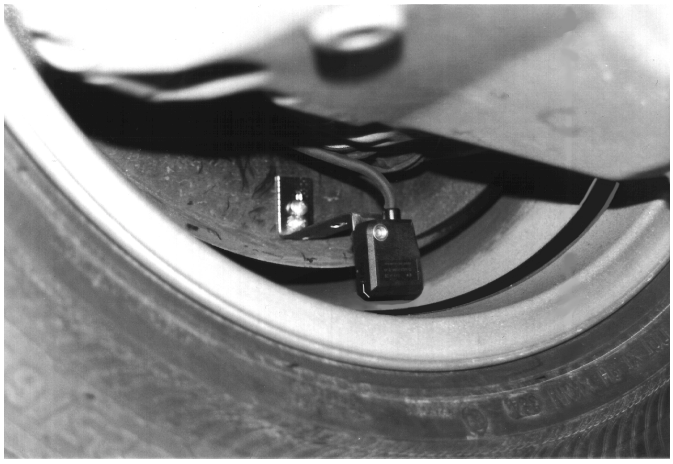


Fig.10

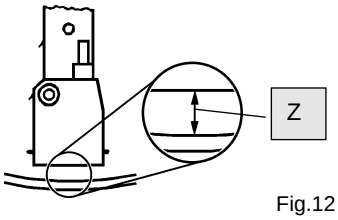


Fig.12

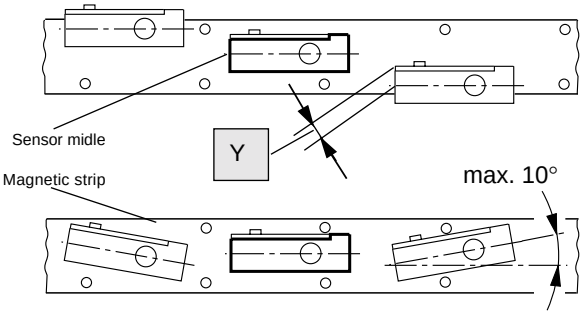


Fig.13

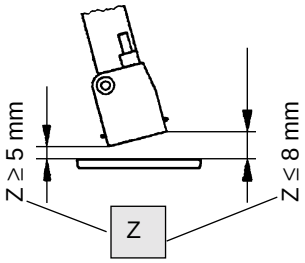
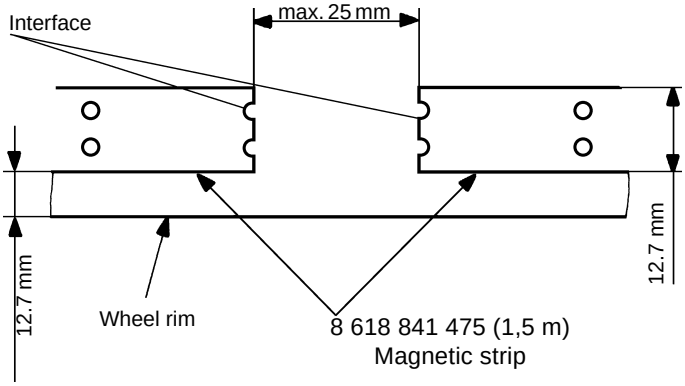


Fig.14



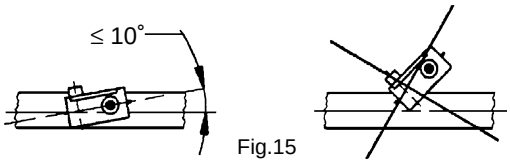


Fig.15

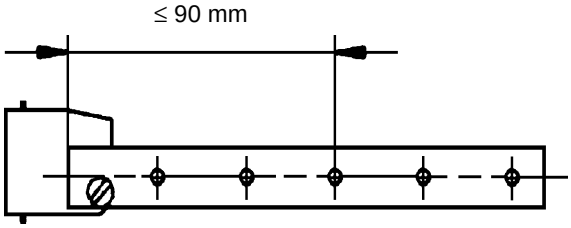


Fig.16

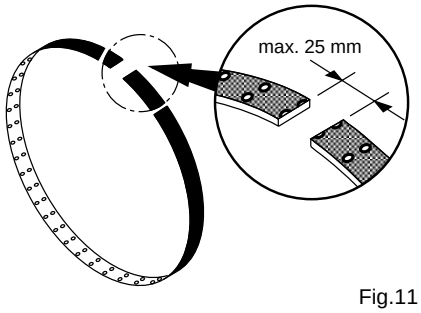


Fig.11

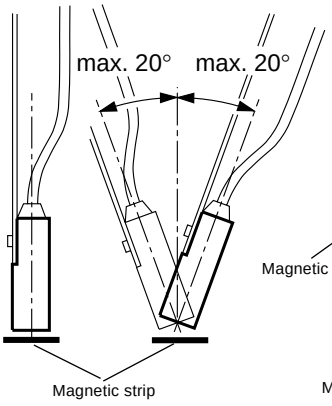


Fig.17

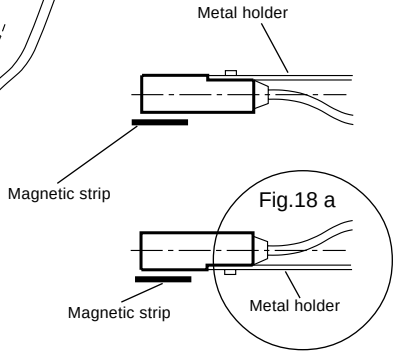


Fig.18

Connection of the sensors